

ANNALS OF NATURAL HISTORY.

I.—*Descriptions of some Mammalia discovered in Cuba by W. S. MacLeay, Esq. By JOHN EDWARD GRAY, F.R.S., &c. With some account of their Habits, extracted from Mr. MacLeay's Notes.*

THE small collection of Mammalia made by Mr. MacLeay during his stay in Cuba consisted of the following species of *Cheiroptera*, and a fœtal specimen of a Dolphin (*Delphinus*), which I have not been able to determine on account of its youth.

The bats, besides adding to our knowledge, are very interesting forms, and several hitherto unrecorded species are particularly interesting, as enabling me to locate with certainty, according to my present views, the genus *Mormoops* of Dr. Leach, of which only a single dried specimen was before known, and which had always been placed among the anomalous genera of this interesting family. It is curious, as regards the geographical distribution of these animals, which have usually been considered very local, that out of this small collection of eight species five should prove to be new to science and one of them an entirely new form, and that the other three should be common to Cuba and Jamaica.

VESPERTILIONIDÆ, Gray.

Tribe *Phyllostomina*, Gray.

Artibeus falcatus, Gray. Edge of the lips crenulated, inner part of the sides near the angle ciliated, front of the lower lip with a small central tubercle surrounded by a lunate series of six distant small warts. Nose-leaf broad ovate lanceolate, expanded, with a very large elevated laminar crumpled projected edge on the sides. Tragus thick and convex internally at the end, with three or four distinct notches on the outer side of the ears. Fur (in spirits) grey-brown, with dark

tips to the hairs, paler beneath. The wings large, blackish; the index-finger falcately curved, with the membrane between it and the middle finger smooth, nearly transparent. Gland of the penis granular.

The form of the index-finger at once distinguishes this species from all the others of the genus.

Hab. Cuba, "Killed in my bed-room."—*MacLeay*.

Artibeus Jamaicensis, Leach, Linn. Trans. xiii. Phyllostoma jamaicense, *Horsfield*, *Zool. Journ.* vii. 238. Edge of the lips crenulated, the inner edge with a series of brown membranaceous processes. Nose-leaf ovate lanceolate, acuminate, with a broad convex central midrib, edge folded back, and rather compressed at the tip; cheek at the sides of the nose-leaf large, convex, swollen, subtubercular; front of the lower lip triangular, with a central rather large, and two smaller lateral tubercles, surrounded with a series of close oblong warts. Tragus thickened at the top, crenulated externally, with three or four distinct notches at the outer side of the base. The index-finger straight.

Hab. Cuba. "Devours oranges on the trees and leaves the skins almost empty; it also comes into bed-rooms at night in search of mosquitoes."—*MacLeay*.

Brachyphylla cavernarum, Gray. *Vespertilio cavernarum*. *Guilding*, *MS.* Plate I. fig. 1.

Hab. West Indies. St. Vincents, Cuba.

I cannot observe the slightest difference between the Cuban specimen and that which I described from St. Vincents (1837), from the collection of Mr. Guilding, except that the Cuban one is smaller, and probably not an adult specimen, which view is somewhat favoured by the finger-bones being rather shorter comparatively with the armbone. In the Cuban specimen there are several round glands on the chin, and a very distinct convex isolated gland on the side of the face a little behind the angle of the mouth.

	St. Vincents.	Cuban.
Length of body and head	3	2 $\frac{1}{4}$
——— of arm bone	2 $\frac{7}{8}$	2 $\frac{1}{4}$
——— of shin bone	1 $\frac{4}{8}$	1 $\frac{1}{8}$

Tribe *Noctilionina*.

* Tail short, tip free on the upper side of the truncated interfemoral membrane.

MORMOOPS, Leach, not *F. Cuvier*. Nose obliquely truncated, warty; lower lip expanded, membranaceous, sinuous, with a square warty plate in front; ears large, united over the forehead, with the lower edge produced and united to the membranes on the lower lip. Tragus distinct.

Dr. Leach, who first described this genus, characterizes it as having "a single nose-leaf confluent with the ears," and all subsequent writers, misled by his description, have placed it with the leaf-nosed bats. In my new arrangement I placed it at the end of the *Phyllostomina*, with a mark of doubt before it. The specimen under examination shows that it has no true nose-leaf, but that it is much more closely allied to the *Taphozoi* among the *Noctilionina*. This and the new Cuban genus *Chilonycteris*, which agrees with it in many particulars, will together form a new section in that group, characterized by the expansion of the lower lip and the convex and rounded form of the skull.

Mormoops Blainvillii, Leach, Linn. Trans., xiii. p. 77. t. 7.

The Cuban specimen agrees well with Dr. Leach's short description and the detailed figure of the head of the specimen which was formerly in Mr. Brookes's museum, and which he received from (Mr. Lewis) Jamaica: the only difference that I can see between them is that the two appendages in front of the disk in the centre of the chin are rather larger in the figure than in our specimen, and the hinder fold of the hinder membranes in front of the chin is represented as entire instead of being divided; but these I am inclined to regard as most probably errors of the artist, arising from Dr. Leach's specimen being dry, while ours is preserved in spirits.

As Dr. Leach's description was very short I shall now proceed to give a more detailed account of this curious and very interesting animal. The head is nearly globular, with a rather produced muzzle. The nose is rounded above, with three warts on each side, and obliquely truncated below, with a longitudinal central rib and a dentated transverse rib between the margin and nostrils. The upper lip is flat, expanded, with

some acute prominences on its inner, and a series of rounded tubercles on its outer edge; the hinder tubercles are much the largest. The lower lip is expanded, rather membranaceous, variously folded and twisted, forming a complicated appearance on the sides of the chin. There is a small smooth triangular disk above, immediately in front of the lower cutting teeth; and directly in front of this is placed a rather large four-sided expanded plate or disk, which has a quantity of small close warts on its upper face, and two small diverging appendages in the middle of its front edge. The front and hinder edges of this plate are scalloped out.

The ears are membranaceous, very large, broad, united over the upper part of the nose, and dependent over the face, with a slight notch on the upper part of the front edge; the lower side is expanded, with a rounded lobe in front, and is continued into the folded lower lip. The tragus is lunate, with a slight notch on the thickened front edge, and has a large appendage on the outer side of its upper part. The anti-tragus is large and tubercular. The eyes are small, far back, near the conchæ of the ears, and have a large wart before and behind them.

The wings are long, rather wide, hairy beneath near the sides, with rather wide marginal membranes inclosing the first joint of the thumb. The interfemoral membrane is very large, truncate at the tip, and furnished with many transverse and five diverging lines from the tail. The tail is elongate, and the last joint is elongated, tapering, and free in the upper side of the interfemoral membrane. The legs are elongate, slender; the ankle short, tapering; toes nearly equal, compressed, and the heel bone very long and marginal.

Hab. Cuba. "Killed in my bed-room." *MacLeay.*

CHILONYCTERIS, *Gray*. Lipped Bat. Head conical, forehead high, convex; nose obliquely truncated, smooth, with a keeled toothed upper edge; nostrils anterior, inferior; lower lip large, dilated, hairy, with a broad reflexed membranaceous edge, furnished with a group of regular granular warts on the middle of its upper surface, and with a similar smooth membranaceous ridge behind it on the chin; ears large, separate, lateral, elongate, acute, with two folds on the front edge, and

a large notch on the centre of the outer edge, expanded, membranaceous, and produced to the hinder part of the crest on the edge of the lower lip. Tragus distinct, large, with an appendage on the outer side of its tip; eyes small, far back. Wings elongate, narrow, their index-finger of one bony joint; interfemoral membrane very large, elongate, slightly truncated. Heel bones very large, thumb compressed; tail elongate, superior, half as long as the interfemoral membrane, with the last joint free on its upper edge. Hind feet rather small; ankle elongate, subcylindrical; toes nearly equal, compressed.

Essential Characters. Nose obliquely truncated, appendaged; lower lip rounded, with two transverse reflexed membranaceous ridges; ears lateral, separate, with the lower outer edge expanded and continued to the hinder edge of the expansions on the lower lip. Tragus distinct.

This genus is highly interesting from its being intermediate between the *Sacopteri* and the genus *Mormoops* of Dr. Leach.

Chilonycteris MacLeayii, Gray. Fur mouse-colour, (in spirits) with greenish tips to the hairs, rather paler beneath; lower lip, with a triangular central wart and a group of small close warts on the centre of the lower lip plate; edge of the nose with two tooth-like expansions on each side, one over each nostril, and the other, which is rather larger, on the outer side of the first; chin with three longitudinal ridges and a conical wart on each side extending to the hinder edge of the lower chin membrane; wings chestnut-brown, nearly bald, the under sides of the interfemoral membrane with a few scattered hairs. Length $1\frac{3}{4}$, expanse 9". Fore arm $1\frac{1}{2}$; tail $\frac{3}{4}$. Plate I. fig. 2.

Hab. Cuba. "Found in my bed-room; congregates in immense numbers in the eaves of houses and in holes in walls."
MacLeay.

Nyctinomus macrotis, Gray. Ears very large, united in a common tubercle on the forehead, rather hairy in front; lips very large, pendulous; muzzle bald, with a central longitudinal and a transverse marginal ridge of close-set short rigid hairs; upper lip with an oblong tuft of black hairs under the nose;

tail cylindrical, elongate, rather more than half free; feet with a small round hinder pad. The pads of the great and little toes rather large, covered with white hairs, which are curved and rather dilated at the tip. Tragus rather large, truncated, with two or three small lobes on the edge; lobule large, rather obliquely truncated at the tip, and with a slight notch in front of the lower edge. Plate I. fig. 3.

Hab. Cuba. "Sent up from the interior of the island, where it was found in the hollow of a tree." *MacLeay.*

The head and nose of this species are very like the *N. plicatus* of India, but the lips and ears are much larger in proportion, and the lobule of that species is higher, rounded above, and without any notch at the base of the front edge. Like that species, the thumb has a large circular callous pad at its base, which agrees with Spix's character of his genus *Thyroptera*, and induces me to believe that his genus will only prove to be a synonym of *Nyctinomus*.

The species of *Nyctinomus* at present known may be thus divided:—

A. *Ears united at the base in front on a common tubercle.*

Lobule high, rounded, without any notch at the front of the base; ears large; tragus distinct. *N. plicatus.*

Lobule elongate, truncate above, with a notch at the front of the base; ears very large; tragus very small. *N. macrotis.*

B. *Ears close but separate at the front of the base.*

Lobule semi-ovate, not notched in front; tragus subquadrate, rather large. *N. nasutus.*

Molossus tropidorhynchus, Gray, *Mol. velox*, Horsf. Zool. Journ. vii. 237. Upper lip with a roundish tuft of close slender hooked hairs under the nostrils; muzzle angular with a central longitudinal and a transverse slightly crenated keel; throat pouch large; tail rather slender, tapering, more than half inclosed in the membrane.

Hab. Cuba. "Very common in the city of Havana." *MacLeay.*

This species is very like *Dysopes velox*, but is smaller, and differs in having only a single central ridge between the nostrils, which is forked and sends a transverse ridge over each,



Brachyphylla cavernarum.



Chilonycteris MacLeayii



Nyctinomus macrotis

Chiroptera of Cuba.